

CLAIMS

1 - An annular sealing cup with axis Δ , a so-called replenishment cup, which is intended to be positioned between a hydraulic cylinder (3) and piston (4) and which has a « U » axial section comprising:

- 5 ▪ a static branch (10) defining a static sealing annular lip (11),
- a dynamic branch (12) defining a dynamic sealing annular lip (13),
- and a core (14) connecting the static (10) and dynamic (12) branches and defining an annular bead (15) opposite the lips,

characterized in that the connecting surface (24) between the static branch (10) and the core (14), located opposite the bead (15), has a concave shape corresponding to a local reduction in the thicknesses of the static branch (10) and of the core (14) at the connecting region between the static lip (11) and the core (14), so as to define a rotation area (21).

2 - The sealing cup according to claim 1, characterized in that the connecting surface (24) between the static branch (10) and the rotation area (21), located opposite the bead (15), has at least one inflexion point (25).

3 - The sealing cup according to claim 1 or 2, characterized in that the minimum thickness (e_{10}) of the static branch (10), in the rotation area (21), is between 60 % and 85 % of the maximum thickness (E_{10}) of the static branch (10) and preferably between 65 % and 80 %.

4 - The sealing cup according to any of claims 1 to 3, characterized in that the internal (22) and external (23) faces of the static sealing lip (11) are substantially parallel outside the bending area (21).

5 - The sealing cup according to any of claims 1 to 4, characterized in that the internal (22) and external (23) faces of the static lip (11) form with the Δ axis, an angle (α) between 0° and 10° .

6 - The sealing cup according to any of claims 1 to 5, characterized in that the internal (35) and external (36) surfaces of the dynamic sealing lip (12) converge on one another towards the bead (15) of the cup.

7 - The sealing cup according to any of claims 1 to 6, characterized in that the internal (35) and external (36) faces of the dynamic sealing lip (12) are tapered and form with the Δ axis, an angle (β , β') between 15° and 30° .

8 - The sealing gasket according to any of claims 1 to 7, characterized in that the core (14) has at least one replenishment notch (40) at the connecting surface, between the bead and its side face located in the extension of the dynamic sealing lip.

5 9 - The sealing cup according to any of claims 1 to 8, characterized in that the connecting surface (30), between the core (14) and the dynamic branch (12), located opposite the bead (15), is at least partly convex and corresponds to a local increase in the thicknesses of the core (14) and of the dynamic branch (12), defining a stiffness area (29).

10 10 - The sealing cup according to claim 9, characterized in that the connecting surface (30) between the dynamic branch (12) and the stiffness area (29), located opposite the bead (15), has at least one inflexion point (31).

11 - The sealing cup according to claim 9 or 10, characterized in that the connecting surface located opposite the bead, between the bending area (21) and the stiffness area (29), has at least one inflexion point (32).

15 12 - The sealing cup according to any of claims 9 to 11, characterized in that the minimum thickness (e_{14}) of the core (14) in the bending area (21) is between 45 % and 80 % of the maximum thickness (E_{14}) of the core (14) in the stiffness area (29), and preferably between 68 % and 75 %.

20 13 - The sealing cup according to any of claims 9 to 12, characterized in that the surface of the bead (15), is substantially planar and perpendicular to axis Δ of the cup on the one hand, and on the other hand, forms a substantially right angle with the side surface (37) of the core (14) delimiting the stiffness area (29) and connecting the bead (15) to the dynamic sealing lip (13).

25 14 - The sealing cup according to any of claims 9 to 13, characterized in that the static sealing lip (11) is located on the outside of the cup, whereas the dynamic sealing lip (13) is located on the inside of the cup.